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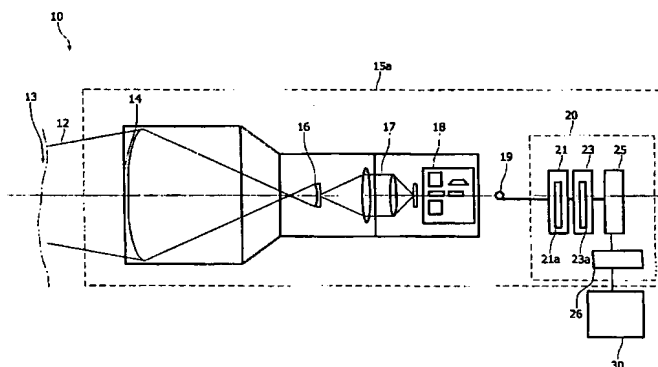
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(54) Title: AN IMAGING SYSTEM, AN X-RAY IMAGING APPARATUS, A METHOD AND A COMPUTER PROGRAM ARRANGED FOR REDUCING AN ARTIFACT IN A THREE-DIMENSIONAL RECONSTRUCTED VOLUME



(57) Abstract: The invention relates to an imaging system (15) comprising artifact reduction means (20) arranged to correct for a ring-shaped artifact in the three-dimensional reconstructed volume. The artifact reduction means (20) comprises a first stage correction means (21) arranged to eliminate the structured noise of the output screen of the image intensifier of an X-ray imaging apparatus (10) using a first corrective image. Preferably, the first corrective image (21a) is pre-calculated and is stored in a suitable memory unit of a computer (not shown). A raw image of the patient is first processed with the first corrective image (21a). The thus obtained gain-corrected image is forwarded to an image deformation correction means (23), where a suitable unwarping function (23a) is being pre-stored. The resulting gain-corrected unwarped images are then made available to the second stage gain correction means (25), where a second corrective image (25a) is applied to the images resulting in a final set of images with a substantially reduced ring-shaped artifact. The final set of images is made available to the image reconstruction means (26) arranged for further processing of the final set of images, the result thereof being visualized on a computer monitor (30) for inspection purposes. The invention further relates to an X-ray imaging apparatus, a method for reducing an artifact in a three-dimensional reconstructed volume and a computer program.

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